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Life's creaking machinery

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Humans and machines grow old together. Chicago biologists Leonid Gavrilov and Natalia Gavrilova used reliability theory to explain why electronic equipment breaks down. The theory, developed in the 1950s, predicts how a system will fail over time, and can be applied to ageing in humans. The biologists say we are not so different from machines.

"The difference is minimised if we think of ourselves in this unflattering way: we are, like machines, made up of redundant components, many of which are defective right from the start," they write in the journal *IEEE Spectrum* (published by the Institute of Electrical and Electronics Engineers). "If we accept the idea that we are born with a large amount of damage, it follows that even small improvements to the processes of early human development could result in a remarkable fall in mortality and a significant extension of human life."

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